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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,623	06/12/2006	Christoph Weber	STT-C-PCT-US	2788

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HUDAK, SHUNK & FARINE, CO., L.P.A.
2020 FRONT STREET
SUITE 307
CUYAHOGA FALLS, OH 44221

EXAMINER

SHECHTMAN, SEAN P

ART UNIT	PAPER NUMBER
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2125

MAIL DATE	DELIVERY MODE
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11/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,623

Applicant(s)

WEBER ET AL.

Examiner

Sean P. Shechtman

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 12, 14-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-4, 7-11, 13, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-19 are presented for examination. Claims 1, 2, 4-5, 7-9, 11-13, 15, 17-19 have been amended.

Drawings

2. Objections withdrawn in light of the amendment.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. . Correction is required.

See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 12 recites the limitation "the contouring differential values $D_{x/c}$, s_{ϕ} , $D_{x/c}$, a_{ϕ} ". There is insufficient antecedent basis for this limitation in the claim. It will be assumed claim 12 depends on claim 4.

Claim 18 recites a chip removal machine comprises a mechanical drive that is regulated by a control system in the preamble, however the body of the claim is directed to the method steps of using the apparatus. Claims in which both an apparatus and the method steps of using the apparatus is indefinite under 35 USC 112, second paragraph. This type of claim is indefinite because it fails to positively recite the boundaries sought for protection. The metes and bounds of the claim cannot be determined because it is unclear as to which category of subject matter is sought for protection, i.e., the method or the apparatus.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 5, 14-16, 18, are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/37168 to Drain (hereinafter referred to as Drain), supplied by applicant.

Referring to claims 1, 18, Drain teaches a method/system for determining a deviation of at least one regulating variable on a chip removal machine with a mechanical drive for a tool or a workpiece (Page 5, lines 1-31, tool, workpiece, actuators), regulated by a control system, wherein the regulation comprises a plurality of values C, X, Z of at least three spatial axes c, x, z for the control system and for the drive, and the values C, X, Z have a functional relation f_{bi} with the axes c, x, z, (Page 4, lines 15-35, controlled motion along Z, C, Z' and X) comprising the steps of:

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preparing a protocol from a plurality of control system actual values $C_{p,s}$, $X_{p,s}$, $Z_{p,s}$ detected by measuring means (Page 6, lines 29 – Page 7, line 2; Page 5, lines 7-9, encoder 20; Page 5, lines 11-14, encoder 26; Page 5, lines 16-18, encoder 32; Page 5, lines 21-23, encoder 38; and/or Page 10, lines 6-11, commanded Z and Z' from commanded values X and C passed to functions) or selected drive actual values $C_{p,a}$, $X_{p,a}$, $Z_{p,a}$,

calculating a control system nominal value according to $Z_{bi,s} = f_{bi}(C_{p,s}, X_{p,s})$ or a drive nominal value according to $Z_{bi,a} = f_{bi}(C_{p,a}, X_{p,a})$, at least in relation to the z -axis (Page 9, line 21 – Page 10, line 11, f_1 or f_2 ; See also Page 10, lines 1-15, actuators), and

calculating a control system differential value according to $D_{z,s} = Z_{p,s} - Z_{bi,s}$ or a drive differential value according to $D_{z,a} = Z_{p,a} - Z_{bi,a}$, at least in relation to the z -axis (Page 10, lines 16-23, subtracting Z_{mean} from Z_1 to Z_n , where Z_{mean} is a function of $Z_1 - Z_n$).

Referring to claim 5, upon further review, Drain teaches that one determines an error differential value according to $D_{z,a}^{sup.f} = Z_{p,a} - Z_{bi,a}^{sup.f}$ with $Z_{bi,a}^{sup.f} = f_{bi}(C_{p,s}, X_{p,s})$ at least for the drive and at least in relation to the z -axis (Page 10, lines 16-23, subtracting Z_{mean} from Z_1 to Z_n , where Z_{mean} is a function of $Z_1 - Z_n$; See also Page 10, lines 1-15, actuators).

14. The method for a chip removal machine for the production of optical lenses from plastic according to claim 1 (Page 2, lines 9-34).

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15. The method according to claim 1, wherein one converts the values C, X, Z of the axes c, x, z into a Cartesian system of coordinates or into a polar system of coordinates (Page 2, lines 1-8, points file; Page 7, lines 13-27).

16. The method according to claim 1, wherein one starts from a theoretical cutting point of an ideal point-like tool (Page 16, lines 6-15) and convert the values C, X, Z of the axes c, x, z (Page 2, lines 1-8, points file; Page 7, lines 13-27) for use of a circular carbide tip (Page 6, lines 2-6), with the circular carbide tip having a center point corresponding to the theoretical cutting point (Page 7, lines 22-27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drain as applied to claim 1 above, and further in view of U.S. Pat. No. 5,903,474 to Sadler et al (hereinafter referred to as Sadler).

Drain teaches the function $f_{sub.bi}$ is a 3D polynomial (Page 10, lines 11-15). Drain teaches all of the limitations set forth above, however fails to teach the function $f_{sub.bi}$ is a bicubic surface spline or a spiral spline.

However, Sadler teaches a bicubic surface spline or a spiral spline function.

Drain and Sadler are analogous art because they are from the same field of endeavor, machining.

Because both references teach functions, it would have obvious to one of ordinary skill in the art at the time that the invention was made to substitute one function for the other to achieve the predictable result of a 3D bicubic surface spline or a spiral spline function.

Allowable Subject Matter

7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Referring to claim 2, neither Drain nor the prior art of record, taken either alone or in obvious combination disclose that at least for the drive and the z-axis a contouring differential value is determined according to

$$D_{sub.z,a.sup..phi.} = Z_{sub.p,a} - Z_{sub.bi,a.sup..phi.}$$

with

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$$Z_{bi,a}^{\phi} = f_{bi}(C_{p,a} + \Delta\phi, X_{p,a}),$$

where the value $\Delta\phi$ corresponds to a phase shift of the c-axis, which results in a torsion of the generated lens contour, wherein plural values of $Z_{bi,a}^{\phi}$ are determined.

It is for these reasons that applicant's invention defines over the prior art of record.

Response to Arguments

8. Applicant's arguments filed 9/17/07 have been fully considered but they are not persuasive.

In response to applicant's arguments, the recitation of the chip removal machine comprises a mechanical drive that is regulated by a control system has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., an individual control system differential value or an individual drive differential value is calculated for each value Z_i to Z_n) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Drain fails to teach calculating a differential value as a function of the nominal value. The examiner respectfully disagrees. Drain teaches Z_{mean} is a function of Z_{max} , wherein Z_{max} is the maximum commanded position of the workpiece along the Z axis, wherein $Z_{max} = f1(X,C)$ (Page 9, line 8 - Page 10, line 27). Drain further teaches that subtracting Z_{mean} from $Z1$ to Zn (Page 10, lines 16-23). The examiner respectfully submits that subtracting Z_{mean} from $Z1$ to Zn , wherein Z_{mean} is a function of Z_{max} , wherein Z_{max} is the maximum commanded position of the workpiece along the Z axis, wherein $Z_{max} = f1(X,C)$ (Page 9, line 8 - Page 10, line 27), is calculating a differential value as a function of the nominal value.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

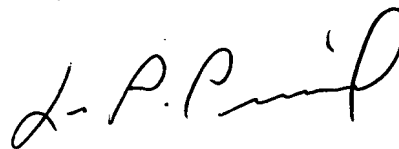
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman

October 31st 2007



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